Illinois

ANNUAL REPORT ON THE EFFICACY OF CAPACITY DEVELOPMENT
September 30, 2005

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BACKGROUND

The *Safe Drinking Water Act Amendments of 1996* (SDWA) (PL104 -182, August 6, 1996, Title XIV, Section 1420) make provision for each primacy agent to provide for full funding of the State Revolving Loan (SRF) fund (Section 1452) allocation. This is contingent on the federal operator certification program requirements (Section 1419) being met and that a capacity development program is established and implemented. Failure to meet either the program or reporting requirements specified within these sections can result in withholding of up to 20 percent of the SRF funds available to the primacy program. Illinois has adopted legislation and rules (415 ILCS 5/15, 35 Ill. Adm. Code 651.102, 652.701-702; 77 Ill. Adm. Code 900.45(c)) for new public water supply systems, which must complete a capacity demonstration in order to obtain a construction or operating permit. The Strategy for Existing Public Water Systems was approved by U. S. EPA Region 5 September 27, 2000, and is being implemented. Revisions to the Strategy for Existing Public Water Systems have been made based upon experience learned through early implementation efforts. Those changes are noted in this report. New reporting criteria for Annual State Capacity Development Program Implementation Reports was developed by USEPA and sent to all primacy states on June 1, 2005, by certified mail (received by Illinois on August 25, 2005). This report is structured in accordance with that memorandum.

ILLINOIS CAPACITY DEVELOPMENT PROGRAM

Provision of a safe and adequate supply of drinking water to all Illinois public water supply consumers is, and has been, a top priority for the Illinois Environmental Protection Agency (EPA) since its inception in 1970. Illinois views the Capacity Development program as a further opportunity to place added emphasis on staff activities that combine elements of technical adequacy with financial and managerial capacity review of public water supply operation and development.

Illinois is coordinating capacity development at the field office level, as indicated in our approved Strategy for Existing Systems (Strategy), with tracking and oversight in the Safe Drinking Water Information System (SDWIS) database occurring at our headquarters office. Since the Year 2000, Illinois has worked to discover the best method to integrate capacity development for all existing public water supply systems. This process has evolved to include provision of capacity assistance on an as needed or request basis and to fulfill other primacy obligations for inspection and compliance monitoring, State Revolving Loan Fund inspections, and other State and federal requirements.

The Field Operations Section (FOS) implemented a more in-depth capacity pre-screening process during 2003. In order to make more efficient use of time during engineering evaluations (called “sanitary surveys” at the federal level), field personnel began sending a special letter containing a questionnaire at least two weeks prior to scheduling the evaluation. This letter asks for specific materials to be made available for review by the Illinois EPA representative during the system evaluation. Furthermore, the questionnaire is to be completed and returned to the appropriate FOS staff prior to the on-site visit. The requested data includes a schematic or diagram of the public water system (from source through distribution system), all materials that cannot be found in Illinois EPA records, material that needs to be updated, information regarding on-going cross-connection program, and capacity assessment worksheets. These worksheets

include managerial, financial and technical aspects of the water supply's operation. The questionnaire also emphasizes the need for facility personnel or officials that are responsible for any financial or managerial data, potentially outside the expertise of the certified operator in responsible charge, to be present at the time of the engineering evaluation. The intent of this request is to provide water supply decision makers an opportunity to present information and respond to questions that the FOS staff might have pertaining to this data evaluation.

Each completed pre-screening survey is reviewed in the office before the field engineer visits the water supply to conduct the engineering evaluation. If necessary, missing items are identified and again requested by Regional staff prior to the scheduled evaluation. Completed surveys are then reviewed on-site with water supply operators and officials during the routine engineering evaluation. This on-site assessment provides an opportunity for field engineers to review and document (as needed), the actual records, official papers, or files referenced in the pre-screening survey. If the water supply officials and staff have not completed the pre-screening survey, survey elements are reviewed during the engineering evaluation visit. Depending upon the situation, the missing information from the pre-screening report may be completed during the visit or the regional engineer may stipulate a specific date for completion of the survey as a part of the engineering evaluation letter that is sent to the owner and official custodian of the water supply, with a copy to the certified operator in responsible charge. If the survey was not completed by the public water supplier in a timely manner, it is written up in the evaluation letter as a violation, and required to be submitted within 45 days or less.

The engineering evaluation letter that is sent to the public water supply owner or official custodian following the on-site evaluation includes both sanitary defects found during the technical evaluation and deficiencies or inadequacies documented through the pre-screening survey process. The elements of the pre-screening survey are then be integrated into the engineering evaluation so that on-going tracking of the subject elements will continue and become a part of the base drinking water program. Depending upon the nature of the violation, this notice is sent either as a non-compliance advisory or a violation notice. Written response and a plan for achieving compliance are required. Field Operations staff and Compliance Assurance Section follow up to ensure that compliance agreements are met Capacity data is tracked in the SDWIS data system.

The process of requiring a new pre-screening survey to be completed each time an engineering evaluation is conducted (every three to five years) will continue until all technical and managerial areas are included in the engineering evaluation. This ensures that data is kept current and reminds water supply officials of the need to maintain compliance with existing regulations. Questions and data collection items on the pre-screening survey will be evaluated prior to each visit based upon the last survey and upon new regulations, requirements and priorities. This allows the Illinois EPA to adjust survey items for individual water suppliers to address new program priorities. Subsequent visits and follow-up inspections to a water supply also enable regional FOS staff to compare data and determine if improvements to capacity have been achieved.

Special emphasis was placed on emergency operating plans (EOPs during FFY 2003–2004, and FFY 2004-2005. EOPs address a considerable number of elements necessary to demonstrate

capacity. Federal requirements for a vulnerability assessment, and an EOP were used to emphasize the need to be prepared for any sort of emergency. Emergency planning and cross-connection control are now basic engineering evaluation elements, and remain priority security considerations during each fiscal year evaluation process.

Presentations on topics and issues basic to capacity development continue to be offered at various seminars, conferences, annual meetings and workshops. Many presentations continue to include the development of emergency management plans and stress the need to keep all plans up to date. The full concept of capacity development is briefly described as a part of each of these presentations.

RESOURCES

Illinois' original Capacity Development Strategy described the plan to add additional headcount at the regional level, and to operate the capacity development program as a separate but cooperative segment of the base drinking water surveillance program. The goal, once new FOS staff were hired and trained, was to assign capacity demonstration coordination responsibilities to experienced FOS staff while new staff were trained to cover the full gamut of FOS duties. Early retirement incentive programs and general attrition have resulted in no net gain in field operations staff positions. New staff have been added in SFY 2005, but some attrition continues to occur, keeping staffing levels the same. Experience with implementing and maintaining capacity development over the past five years has demonstrated to the Agency that it is most efficient to fully integrate the capacity development program for existing systems into the routine surveillance and assistance duties of all regional offices. Past staff shortfalls have caused engineering evaluation inspection cycles to lag in some regions. Addressing this inspection lag is the first priority; integration of capacity elements into each engineering evaluation ensures that those systems that have been backlogged will undergo a capacity review at the same time as the engineering evaluation, and will be directed to address all issues in a single effort. Compliance plans and schedules developed during this process will take all non-compliance elements and capacity issues into account and ensure that future operations meet the capacity development program goal of on-going operational compliance.

In response to current budget constraints and other long-term resource commitments, the FOS has developed a Strategic Plan to carry out program objectives. A key aspect of this plan includes utilization of the DPWS Groundwater Section (GWS) staff for assistance performing groundwater system inspections. Moreover, the goal of this strategy will be to use the completed source water assessment and field presence to directly promote implementation of protection programs. Sanitary survey training will be provided to GWS staff prior to assignment to FOS to complete these inspections. A change in the FOS manager slowed this process, but the new manager has established a standard operating procedure to implement shared resources. Other aspects include prioritization of work, development of an electronic form for inspections, using pocket PCs, and web-based enterprise database solutions for all FOS and GWS business practices. FOS personnel have participated in the piloting of pocket PC use during engineering evaluations, but this tool is not yet in place for all regional personnel. The ongoing integration of this strategy into daily work activities has helped the FOS continue to effectively implement the Capacity Development Strategy despite the resource limitations. Capacity development program goals will continue to be incorporated into routine surveillance operations, technical assistance and operator education opportunities.

SUMMARY

The Illinois EPA continues to support the capacity development program and is convinced that maintaining overall public water system capacity is essential in operating a safe public water supply. Implementation of substantial technical assistance is requisite to accomplishing capacity development in public water supplies that are in distress. This is a high priority of the DPWS. Many of the original premises presented in the Illinois Capacity Development Strategy are proving to be accurate. That is, the resource demands of true capacity assistance are significant. However, the Illinois EPA continues to believe that capacity development is an integral element of the working relationship between DPWS staff and public water supply officials. As such, capacity demonstration elements will continue to be integrated into the routine activities of the FOS in order to ensure that progress is made.

Reporting Criteria for 2005

Reporting criteria regarding capacity efficacy outlined in the June 1, 2005, memorandum from Cynthia Daugherty are addressed below.

1. *State Capacity Development Program Annual Reporting Criteria - New Systems Program Annual Reporting Criteria*
   a. Illinois' legal authority to implement the New Systems Program has not changed within the previous reporting year.
   b. There was no change to the Control Points from the original Strategy for Existing Systems during FFY 2004-2005
   c. New system data can be extracted from SDWIS, using the facility start date. SNC status can also be extracted using USEPA's current process. USEPA should extract and review this information without requiring the States to do it in keeping with the concept of the mandatory use of SDWIS.
   d. None of these supplies have been on the SNC List.

NEW COMMUNITY PUBLIC WATER SUPPLIES

1.	IL0070300	Poplar Grove South	05-01-03
2.	IL0070350	Poplar Grove West-Countryside	10-01-04
3.	IL0190080	Heritage Estates MHP	05-01-03
4.	IL0310320	Poor Clares Monastery	11-01-04
5.	IL0315850	Sterling Estates MHP	07-01-05
6.	IL0971200	Prairie Trails of Long Grove	02-18-04
7.	IL0971210	Terrace Oak Apartments	03-01-03
8.	IL0971770	Volo	03-01-03
9.	IL0975040	Aqua IL Hawthorn Woods	01-01-05
10.	IL1090020	Sciota	01-11-05
11.	IL1170060	South Palmyra Water Commission	12-19-03
12.	IL1430080	Buffalo Hollow Farms Water Assn	09-07-04
13.	IL1590020	RE Water Corporation	04-01-03
14.	IL1610030	Indian Hills Subdivision	03-01-05
15.	IL1730020	Lincoln Prairie Water Company	11-01-04
16.	IL2010030	Forest View MHP	06-01-05

NEW NON-COMMUNITY NON-TRANSIENT PUBLIC WATER SUPPLIES

1.	IL31486019	North Boone High School	09-27-04
2.	IL3148676	Proviant Technologies	11-17-04

B. *Existing System Strategy*

1. Effective tools and activities:

On-site assistance, networking with Illinois Rural Water Association, and participation in educational presentations are the three most frequently used tools that Illinois has found successful in helping public water supplies understand and implement programs that sustain capacity. Illinois EPA networks with a number of other agencies and departments to assist public water supplies in maintaining capacity, such as the Illinois Department of Public Health, Illinois Department of Agriculture, Illinois Department of Transportation, Illinois Department of Labor, Illinois Capital Development Board, Illinois Bond Bank, Illinois Rural Water Association (IRWA), Southern Illinois University – Edwardsville (SIU-E) Environmental Resources Training Center (ERTC), Midwest Technical Assistance Center (MTAC), Illinois Potable Water Supply Operators Association (IPWSOA), local operator associations throughout the State, Illinois Municipal League (IML), Illinois Environmental Regulatory Group (IERG), American Water Works Association (AWWA), Illinois Association of Plumbing, Heating and Cooling Contractors (IAPHCC), American Backflow Prevention Association (ABPA), Illinois Plumbing Inspectors Associations (IPA), American Society of Sanitary Engineers (ASSE), USDA Rural Community Assistance Partnerships (RCAP), local community college programs, and other organizations. Whenever a public water supply has a need that can be met by the combined efforts of the Agency and one or more of these groups, contact is made and efforts begin to provide capacity assistance as needed to that supply. The effectiveness of the Agency is increased significantly through this cooperative assistance process. Individual hands-on assistance is provided in all three Technical, Managerial and Financial (TMF) areas, including rate studies, ordinance, or regulation development and technical operations. These assistance efforts, combined with Illinois' enforcement management program, provide the impetus needed and the formal framework and milestones essential to accomplishing capacity development improvement. The formal Compliance Commitment Agreement (CCA) ensures that: compliance will be achieved in a reasonable timeframe; Agency oversight will continue and assistance will be provided until compliance is achieved and maintained; and a structure is in place to adjust timeframes based upon accomplishments and events that might occur during the compliance process.

Examples of types of assistance provided:

A. Rate and revenue calculation: Water suppliers are referred to IRWA, who will help them complete a rate study and make recommendations for improvement. SIU-E ERTC is recommended if the supplier needs a program similar to Missouri's RateMaker program. Handout materials from the RCAP staff are provided. IRWA also provides assistance in developing budgets, inventories or other management tools for water suppliers. The AWWA has a number of publications available as well, and these are also recommended to water suppliers.

B. Dealing with new board members: Water suppliers are referred to IRWA for the Water Board Bible; field operations staff visit council meetings or special committee meetings to educate board/committee members on their roles in and responsibilities to the drinking water program; IML workshops are recommended. These organizations have demonstrated success in assisting water suppliers to resolve problems and develop capacity. Other organizations are recommended as appropriate.

C. Technical operations problems: Illinois EPA provides assistance through field staff and sometimes contacts IRWA. Additionally, FOS often requests that the supplier contact their consulting engineer or other individuals to receive additional assistance as necessary.

D. Emergency management plan preparation: Illinois EPA provides assistance through field staff and also recommends the programs that IRWA, ERTC and MTAC have available. Some of these programs are offered through workshops or are available for purchase in CD or paper form. A significant amount of detail on EOPs is available on the web, but IRWA and ERTC also provide hands-on assistance in completing a plan. IEPA pass through of funds from USEPA Security Grants to ERTC, IRWA and ISAWWA for developing and presenting security workshops and providing technical assistance also increased capacity in this area for many public water supplies during FFY 2005.

Assistance for all other types of capacity issues is provided as needed, by the Agency and by networking with the appropriate assistance organization.

2. Identification of systems in Need of Capacity Development Assistance: Illinois EPA and IDPH continue to identify systems in need of capacity development assistance through routine contact with the water suppliers, and as a result of review of routine sample analyses and reports required to be submitted to the agencies. This contact may come through the routine evaluation cycle or through technical assistance visits in response to requests by the water supplier or complaints from consumers. Some assistance requests are generated at training meetings, where FOS staff meet informally with operators to educate them on changes to regulations and improvements in technology. Contact with water supply personnel is maintained on a frequent but not specifically scheduled basis, except for routine engineering evaluations. Review of all PWSs for capacity development assistance is an ongoing process that occurs each time contact is made with a supplier or operator. In the event that adequate resources are not immediately available to address all public water supplies with capacity deficiencies, the priority system outlined in the original Strategy are used to order the response to assistance needs. Because both Illinois EPA and IDPH implement the program through the regions, assistance can almost always be given when needed, regardless of the priority rating of the public water supply.

3. *PWS Capacity Concerns of Needs Identified during the Reporting Period:*

FOS staff coordinate with many water supply professional organizations throughout the year to plan educational seminars, meetings and workshops. As a part of these planning committees, FOS personnel are able to describe areas of weakness or need for improvement throughout the drinking water program that have been determined through engineering evaluations, sampling or compliance activities, or other contact with water suppliers; outline new regulatory requirements or changes to existing requirements that need to be communicated to operators and water suppliers; and ensure that speakers or sessions are included to address these areas. FOS participates in annual educational program planning activities for the IRWA, IPWSOA, Southern and Northern Small Systems Conferences, and the ISAWWA Annual Meeting and seminar series. This capacity effort affords FOS at least five opportunities at different times throughout the year for input to address capacity development needs as a part of educational offerings held during each year. If problems are identified in specific locations, FOS works with the appropriate organization to hold a seminar to address these problems. These educational programs also qualify operators for renewal training credits needed every three years to retain their certificates of competency.

The ERTC worked with FOS to address two specific areas of concern in management during FFY 2005. These two seminar topics were funded by MTAC. A rate analysis workshop featuring the Missouri "Show Me Ratemaker" author, Carl Brown, was held at four locations throughout the State to help water supply officials better plan and manage their finances. A second area of concern, cross-connection control training for administrators, was also held in three areas of the State. This seminar was designed to help those who must establish and keep records for the cross-connection program implement an effective program within their water supply and to integrate cross-connection control into emergency management plans. The seminar has been held in Missouri, and one is scheduled to be held this fall in Indiana. Missouri has requested four additional sessions to be held throughout its state in 2006.

The most effective method for ensuring that public water systems operate in compliance is personal contact with water supply officials and operators by field staff through frequent telephone or written communication, operational visits and inspections. Both Illinois EPA and IDPH find that building and maintaining relationships with water supply operators and officials help identify potential problems and non-compliance issues at their outset. This enables problem solving in an expedient fashion and limits the duration of time that a supply might operate in non-compliance. The level of communication provided is strictly dependant upon available personnel resources, and the other duties and activities those field staff must perform.

Non-Transient Non-Community Public Water Supply (NTNCWS) Capacity Development: Technical assistance provided during sanitary surveys is the most effective tool for IDPH to improve capacity at NTNCWS. Managerial and technical capacities improve following these visits. Indirectly, financial capacity also improves following these visits because a commitment to provide resources to improve operations or achieve compliance is generally a result of these visits.

Full implementation of the operator certification program at NTNCWS has also resulted in increased capacity. Having personnel trained in the basic operations of a water supply increases technical and managerial capacity and also has an indirect result of increased financial capacity. IDPH now has only three of the 397 NTNCWSs without a certified operator.

SDWIS/State was installed at IDPH in November 2004. Loading of site visits into SDWIS is underway to track sanitary surveys and capacity development visits. In addition, compliance tracking will be greatly enhanced, which will improve capacity development efforts.

USEPA Region V provided a sanitary survey course for inspectors of NTNCWSs in November 2004. All IDPH inspectors and several local health department inspectors attended this course. The course was very well received. Most inspectors felt the course provided insight and increased knowledge to the sanitary survey process. This training, through better prepared inspectors, will provide increased technical capacity to Illinois NTNCWSs.

The IDPH has used the tools outlined above to address capacity/compliance issues associated with new regulations that have recently become effective. The Long Term 1 Enhanced Surface Water Treatment Rule, Stage 1 Disinfection/Disinfection Byproducts Rule and the Arsenic Rule have all created non-compliance issues at NTNCWSs. IDPH has utilized the sanitary survey process to consult with knowledgeable certified operators to address these new regulatory issues. In many instances, the inspector has identified a regulatory issue, consulted with the certified operator, and referred the operator to IDPH Central Office personnel more familiar with the complexities of these new rules. In several instances, additional site visits have been scheduled with both central office personnel and inspectors in attendance to help the certified operator address these compliance problems. This approach has been effective. Non-compliance issues have been addressed and Technical, Managerial and Financial Capacity appear to be increasing.

Developing and maintaining a network of agencies and persons available to advise and educate water supply officials and operators is also essential. This network consists of informal and formal participants including equipment manufacturers and suppliers, chemical suppliers, local and state regulatory personnel, certified laboratory personnel, plumbing officials, business and industry consumer advocates, and media representatives. Also, the involvement of professional associations and organizations such as the Illinois Rural Water Association, Illinois Rural Community Assistance Program and the Midwest Technical Assistance Center (MTAC) that sponsor or provide on-site assistance is of paramount importance. This network is being constantly changed and expanded as capacity experience and activities increase. The capacity development process works best as a cooperative effort where areas of expertise can be accessed depending upon the needs of the system, and integrated into the compliance efforts of the FOS section.

Explanation of upcoming regulation changes is the most frequent TMF concern of existing public water suppliers. The second most frequent area of interest is emerging technologies for improved water treatment to more efficiently meet existing or new regulation standards. Illinois responds by working with IPWSOA, IRWA, Illinois Section AWWA, local operator associations, the ABPA and other water supply education organizations to participate in seminars and workshops covering topics where assistance is needed. Illinois EPA meets with both the

IRWA and the MTAC at separate times to coordinate educational activities in new regulations and basic water supply operations. Illinois EPA also meets with representatives from the SIU-ERTC to plan educational programs for water suppliers based upon needs identified during any type of contact with water suppliers. Evaluation forms for educational offerings also provide a link to educational needs of water suppliers, and are used by all entities to develop seminar and workshop programs. These review and criteria development efforts are conducted on an ongoing basis, as FOS personnel participate in planning activities throughout each year for all these organizations. IDPH, as noted above, found compliance with newly effective regulations to be the most urgent capacity need during this reporting period. IDPH found it useful to provide mailouts from the Central Office to notify operators of these requirements. Inspectors were then able to identify capacity deficiencies during annual sanitary surveys.

5. A copy of the revised Strategy is enclosed. Please review and approve the changes to Illinois' existing capacity development program.

II. Reporting Period and Submittal Dates

The reporting time frame used by Illinois is that of the federal fiscal year, October 1 – September 30 each year. Illinois understands that, in accordance with the June 1, 2005 memo from Cynthia Daugherty, the report is due within 90 days of the end of the reporting period.

CONCLUSION

The Illinois EPA anticipates that this report meets the reporting needs required by the SDWA and provides U.S. EPA insight into the implementation of Illinois' Capacity Development Program. Attached please find the requested summary table entitled, "Annual Report on New System Capacity Development Program" for the reporting period of October 1, 2004 through September 30, 2005.